



**NATIONAL INSURANCE
CONSUMER ORGANIZATION**

**MEDICAL MALPRACTICE INSURANCE
1985-1991 CALENDAR YEAR EXPERIENCE**

**A Report By
The National Insurance Consumer Organization**

MARCH, 1993

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As the nation debates National Health Insurance, there has been much discussion of the role/cost of Medical Malpractice insurance. This report analyzes the costs of Medical Malpractice insurance over the last seven years, a period which represents the maximum data on rate of return on net worth published by the National Association of Insurance Commissioners (NAIC). The report focuses particular attention on the most recent period, Calendar year 1991, data for which became available from the NAIC in December, 1992.

In this analysis, we will look at these issues:

- ★ Cost of Medical Malpractice Insurance to doctors and hospitals;
- ★ Breakdown of the underlying expenses
 - Claims Incurred
 - Insurance Company Expenses
 - Investment Income
 - Insurance Company Profits
- ★ Implications for National Health Insurance Policy

Sources of Data - Method - Definitions

The attached Exhibits show the total national experience for Medical Malpractice Insurance for all insurance companies licensed to write in the United States. These data do not

include self-insured hospitals or "off-shore" unlicensed insurers. The data were compiled by the NAIC from Annual Statements of financial data required to be filed with them by the insurance companies. These Annual Statements are subject to audit by the individual states and are sworn as to their accuracy by officials of the filing insurance company.

The data shown is "direct" experience; that is, before considering the impact of reinsurance. "Direct" experience is the total of actual premiums that insured doctors and hospitals paid throughout the nation. Thus, this is the experience from the perspective of the insurance buyers. The insurance companies results will be somewhat different because the insurance companies secure reinsurance to "lay off" part of the risk so that, in years of high losses, the reinsured or "net" result is better than the "direct" result; in years of low losses the opposite is true.

The time series information is from 1985 to 1991, the longest period of data available from NAIC on rates of return on net worth. The seven years is also roughly the length of a typical insurance cycle and therefore should capture typical high and low profit years.

Certain terms must be defined. Most important is "Losses Incurred". This is the sum not only of claims paid by insurers to doctors and hospitals but includes the insurers' estimates of what they expect to pay out in the future on both claims they know about and even those they do not yet know about. This

latter reserve, on the unknown claims, is the so-called "Incurred-But-Not-Reported", or IBNR, reserve.

Premiums Earned are the premiums paid in by doctors and hospitals that the insurers have "earned" through the passage of time. For example, if a policy costs \$120 and has been in effect one month, the insurer has earned 1/12 of \$120 or \$10. When premiums paid in by doctors and hospitals are going up, premiums earned are lower than premiums paid in; when premiums paid in by doctors and hospitals are going down, premiums earned are higher.

Expenses include defense attorney costs, overhead costs and state taxes.

Dividends shown in the attached exhibits are those paid back to doctors and hospitals as refunds of excessive premium charges.

Underwriting Profit deducts losses incurred, expenses and dividends from earned premiums.

Investment Income is the money that insurance companies make from investing reserves on claims and unearned premiums as well as investing net worth (net worth is also called "retained earnings"). For a line, such as Medical Malpractice, where claims reserves are held for a long period prior to payment of claims to victims, investment income is large. Lines such as these are called "Long-Tail" lines as opposed to such "Short-Tail" lines as Fire insurance where claims are paid off quickly.

Retained Earnings is the net worth backing up the business, overwhelmingly obtained from earnings in earlier years.

Return on Net Worth is the profit divided by the retained

earnings.

Analysis

1. Cost of Medical Malpractice Insurance

In 1991, doctors and hospitals paid \$4,862,170,000 in premiums for medical malpractice insurance coverage in the United States of America (see Exhibit 1). The State-By-State costs ranged from \$7,927,000 in Rhode Island to \$699,493,000 in New York (see Exhibit 2). While these costs have risen over the past seven years -- from \$2,660,985,000 in 1985 to \$4,862,170,000 in 1991 -- the costs have declined from the 1989 high of \$5,119,518,000 and are lower than the amount doctors and hospitals spent in 1988 (see Exhibit 3).

The 1985 to 1991 reported premium increase is 82.7% or 10.6% per year. Adjusted for inflation, the real seven year increase is between 44.6%, adjusted for all items CPI and 17.2%, adjusted for medical care inflation (see Exhibit 3).¹ In other words, the increases are:

	<u>As Reported</u>	<u>Adjusted for All Items CPI</u>	<u>Adjusted For Med. Inflation</u>
1985-1991 Change	+ 82.7%	+ 44.6%	+ 17.2%
Annual Change	+ 10.6	+ 6.3	+ 2.7

Medical Malpractice insurance premiums have risen over the past seven years, with all of the increase in early years. In recent years medical malpractice insurance premiums have fallen

¹ NICO believes the most important "real" increase is that adjusted by medical care inflation since, in the context of the National Health Insurance discussion, that is the relevant measure (i.e., is this cost changing in a way that lowers or raises health care costs).

so that, in 1991, costs were below 1988 costs. Even so, the premium costs have risen faster than inflation, even faster than medical care inflation (by 2.7% per year).

As a percentage of total health care costs in 1991, Medical Malpractice insurance premiums represent less than one percent (six-tenths of one percent) of costs, unchanged over the period studied. (See Exhibit 4.)

In the next section, we will look at what underlying costs drove this premium increase.

2. Underlying Expenses

(A) Losses Incurred

In 1991, the National Medical Malpractice Insurance Losses Incurred were \$2,708,229,000, or 55.7% of Premiums Earned (see Exhibit 1). Losses ranged from a low of - \$15,214,000 in Oregon (the negative "loss" is a result of significant reductions in previously established excessive reserves in the state) to \$541,408,000 in New York (see Exhibit 2).

Losses Incurred over the 1985 to 1991 period have fallen from \$3,206,487,000 in 1985 to \$2,708,229,000 in 1991, a drop of 15.5% (see Exhibit 3). Adjusted to real terms by adjusting for inflation, the drop in incurred losses is even more significant, viz:

	<u>As Reported</u>	<u>Adjusted for All Items CPI</u>	<u>Adjusted For Med. Inflation</u>
1985-1991 Change	- 15.5%	- 33.1%	- 45.2%
Annual Change	- 2.4	- 4.7	- 6.4

Thus, Medical Malpractice Insurance Losses Incurred have fallen sharply over the past seven years, although there was a reported increase from 1985 to 1987. Indeed, the reserves for medical malpractice were overstated by \$1.4 billion at year end 1990 when an additional year of data on those claims was reviewed.²

A very important finding of this study is that costs of Incurred Losses, as percentage of health care costs has fallen in half over the period of study -- from eight-tenths of one percent in 1985 to four-tenths of one percent in 1991 (see Exhibit 4).

(B) Insurance Company Expenses Incurred

In 1991, insurance company expenses for writing Medical Malpractice insurance were \$2,508,880,000, excluding state premium taxes of \$136,140,000 (see Exhibit 1). Combined, the overhead costs were \$2,645,020,000 or 54.4% of premium. These costs, which represent over 50% of premium income, are a very inefficient level of costs. We have not shown the state-by-state insurance company expenses on Exhibit 2, because the NAIC uses national expenses to estimate state costs. The NAIC does not maintain insurance company expenses on a state-by-state basis in the Annual Statement.

In the period 1985 to 1991, insurance company expenses rose from \$1,612,557,000 in 1985 to \$2,645,020,000 in 1991, an increase of 64.0% (see Exhibit 3). Adjusted to real terms by

² Aggregates and Averages, A.M. Best and Co., 1992 Edition, Page 119.

reflecting inflation the increase is:

	<u>As Reported</u>	<u>Adjusted for All Items CPI</u>	<u>Adjusted For Health Care Inflation</u>
1985-1991 Change	+ 64.0%	+ 29.9%	+ 5.2%
Annual Change	+ 8.6	+ 4.4	+ 0.8

This means that insurance company expenses rose at about the same rate as health care inflation during this period. The increase in costs was somewhat faster than health care inflation through 1987 but slowed to somewhere below it since.

PROFIT

In 1991, insurers writing Medical Malpractice insurance in the United States earned a return of \$1,419,750,000 or 15.9% of net worth. (See Exhibit 1). This is the profit after dividends (returns of excess premiums) to doctors and hospitals of 4.2% (over \$200 million). Investment Income amounted to almost 50% of premium, due to the very "long-tail" this line has in its loss reserves. Economists have testified in insurance rate matters that returns of 13 - 16% on net worth are appropriate for this line of insurance.

It should be noted that the rate of return on sales (i.e., premium) is 29.2% (see Exhibit 1). The reason this translates into a return of 15.9% on net worth is either because the actual net worth backing up this business is excessive (i.e., retained earnings of \$8,929,270,000) or the NAIC estimate of net worth has allocated too much net worth under their formula (the NAIC report is based on an assumption that, for each dollar of premium in the medical malpractice line, insurers have \$1.84 backing up the

transaction). According to studies undertaken by the California Department of Insurance, properly capitalized insurers should hold only about \$1.00 of net worth for every \$1.00 of premium for this line of insurance. Had insurers not retained so much previous profit (or the NAIC used a more reasonable allocation), America's medical malpractice insurers return on net worth would have been 29.2%, a remarkably high return which is almost double the profit required to reward the risk of underwriting medical malpractice insurance.

State-by-state profits ranged from a loss of \$37,368,000 in Texas to a gain of \$354,999,000 in California. In terms of percentages, the biggest loss was in the District of Columbia where the loss was 21.2% of net worth (31.6% of sales); the largest profit was in Oregon where the return on net worth was +65.9% (119.2% of sales). (See Exhibit 2.) In the six states that undertook tort reform studied by the General Accounting Office, profits in 1991 averaged 122% above the national average, implying possible insurer profiteering in these states.³

Over the entire time that the NAIC has kept profit or net worth data, 1985 - 1991, the return on net worth for writers of Medical Malpractice has been 14.4% (see Exhibit 3). Profit shows the expected cyclical pattern with a low in 1985 and a high in

³ Arkansas, California, Florida, Indiana, New York and North Carolina. Source: Medical Malpractice, Six States Case Studies Show Claims and Insurance Costs Still Rise Despite Reforms, U.S. General Accounting Office, December, 1986. Profits averaged 46.1% of premiums in these states vs. 20.8% in the other states, averaging 29.2% countrywide.

1989. This is a normal, reasonable profit. However, if net worth was established at less redundant, more economically appropriate levels, returns over the period would have been about twice that needed to attract capital.

IMPLICATIONS FOR NATIONAL HEALTH INSURANCE POLICY

Medical Malpractice is a tiny fraction of health care costs in America. In 1991, it represented just six-tenths of one percent of such costs, unchanged from 1985. Incurred Losses represented only four-tenths of one percent of these costs, half of the 1985 level. Although premiums have risen slightly faster than health care inflation over the past seven years, the incurred losses have fallen by almost 50% over that time relative to health care inflation. Premiums have turned down in recent years reflecting the declining claims costs. Insurer overhead expenses represent half of premiums. These expenses could and should be reduced significantly. Investment income also represents half of premiums and is very significant in this long tail line. Profits of insurers appear to have been fair on the reported net worth basis of NAIC but are excessive when adjusted to more realistic capitalization assumptions. In several states, profits appear grossly excessive.

At six-tenths of one percent of health care system costs to cover all aspects of the cost of medical injury -- medical malpractice premiums are low. The current system appears to be an excellent and reasonably priced approach to protect Americans from faulty medical care, a system that, if maintained, would

give assurance that President Clinton's reform of health care would not result in improper or harmful health care. How else, for less than one percent of overall costs, can America fund the cost of medical negligence and create a strong incentive for safe delivery of health care? While insurance company expenses and profits appear to have been excessive and premium costs should be further reduced, the system works in a generally efficient way to protect Americans from medical negligence.

Exhibit 1

**MEDICAL MALPRACTICE INSURANCE
COUNTRYWIDE RESULTS OF INSURANCE COMPANIES**

CALENDAR YEAR 1991

	<u>Dollars</u>	<u>% of Premium</u>
Premiums Earned	\$ 4,862,170,000	100.0%
Losses Incurred	2,708,229,000	55.7
Defense Attorneys\Other Claim Costs	1,687,173,000	34.7
Overhead, Sales Expense	821,707,000	16.9
Total Ins. Company Expenses (excluding State Taxes)	2,508,880,000	51.6
State Taxes	136,140,000	2.8
Dividends to Doctors, Hospitals	204,211,000	4.2
Underwriting Profit	- 695,290,000	- 14.3
Investment Income	2,367,877,000	48.7
Federal Tax	257,695,000	5.3
Total Profit	1,419,754,000	29.2

		<u>% of Net Worth</u>
Retained Earnings (Net Worth)	\$ 8,929,270,000	100.0%
Return on Net Worth	1,419,754,000	15.9

Source: Report on Profitability, By Line, By State, 1991; December 1992, National Association of Insurance Commissioners.

**MEDICAL MALPRACTICE INSURANCE
STATE-BY-STATE RESULTS OF INSURANCE COMPANIES**

CALENDAR YEAR 1991

<u>State</u>	<u>Premiums Earned</u> (000)	<u>Losses Incurred</u> (000)	<u>Loss Ratio</u>	<u>Profit</u> (000)	<u>Profit As A % Sales</u>	<u>Profit As A % Net Worth</u>
Alabama	\$ 84,979	\$ 20,480	24.1%	\$ 47,758	56.2%	37.2%
Alaska	13,731	2,609	19.0	5,575	40.6	39.8
Arizona	107,812	54,445	50.5	25,767	23.9	14.6
Arkansas	23,135	12,932	55.9	4,789	20.7	11.7
California	529,059	47,615	9.0	354,999	67.1	37.7
Colorado	65,543	23,989	36.6	16,143	28.5	24.2
Connecticut	103,224	34,373	33.3	63,483	61.5	29.6
Delaware	20,068	19,566	97.5	- 2,850	-14.2	- 6.9
D.C.	37,612	39,380	104.7	- 11,885	-31.6	-21.2
Florida	241,421	110,088	45.4	62,769	26.0	19.7
Georgia	134,604	59,899	44.5	50,342	37.4	19.0
Hawaii	16,066	11,118	69.2	- 321	- 2.0	- 1.2
Idaho	14,837	252	1.7	9,511	64.1	53.2
Illinois	289,811	243,731	84.1	17,968	6.2	3.1
Indiana	34,174	13,362	39.1	17,976	52.6	25.6
Iowa	44,120	16,986	38.5	18,398	41.7	25.5
Kansas	32,544	1,562	4.8	23,432	72.0	49.4
Kentucky	58,212	30,736	52.8	13,331	22.9	15.1
Louisiana	50,850	23,340	45.9	17,696	34.8	20.9
Maine	28,883	20,045	69.4	2,657	9.2	5.3
Maryland	107,893	36,899	34.2	48,768	45.2	23.0
Massachusetts	31,127	24,061	77.3	249	0.8	0.5
Michigan	169,347	107,705	63.6	39,966	23.6	12.0
Minnesota	62,903	31,640	50.3	16,795	26.7	17.8
Mississippi	22,132	8,875	40.1	8,255	37.3	22.3
Missouri	112,915	59,055	52.3	28,567	25.3	16.3
Montana	16,613	6,578	39.6	5,349	32.2	24.9
Nebraska	17,972	3,176	17.7	11,233	62.5	35.9
Nevada	25,250	13,130	52.0	5,732	22.7	14.0
New Hampshire	10,253	5,229	51.0	3,455	33.7	18.1
New Jersey	241,892	219,154	90.6	- 9,434	- 3.9	- 2.0
New Mexico	15,161	10,400	68.6	349	2.3	1.7
New York	699,493	541,408	77.4	295,886	42.3	13.3
N. Carolina	91,687	56,296	61.4	9,902	10.8	7.8
N. Dakota	12,764	3,689	28.9	6,905	54.1	32.8
Ohio	246,063	134,350	54.6	48,228	19.5	13.4
Oklahoma	59,666	26,372	44.2	11,695	19.6	21.2
Oregon	48,144	- 15,214*	-31.6*	57,388	119.2	65.9

* This is due to significant reduction of excessive reserves in the state.

Exhibit 2, Sheet 2

<u>State</u>	<u>Premiums Earned</u> (000)	<u>Losses Incurred</u> (000)	<u>Loss Ratio</u>	<u>Profit</u> (000)	<u>Profit As A % Sales</u>	<u>Profit As A % Net Worth</u>
Pennsylvania	228,266	233,288	102.2	- 33,099	-14.5	- 7.5
Rhode Island	7,927	935	11.8	6,064	76.5	39.6
S. Carolina	8,542	5,757	67.4	1,298	15.2	8.4
S. Dakota	9,982	1,777	17.8	5,790	58.0	41.1
Tennessee	118,135	29,179	24.7	41,584	35.2	22.2
Texas	214,757	211,536	98.5	- 37,368	-17.4	- 9.4
Utah	24,858	13,722	55.2	2,759	11.1	9.4
Vermont	12,593	4,143	32.9	6,032	47.9	27.7
Virginia	76,537	35,360	46.2	27,859	36.4	18.9
Washington	104,323	23,264	22.3	51,640	49.5	39.2
W. Virginia	34,595	38,400	111.0	- 6,435	-18.6	- 8.6
Wisconsin	74,812	36,583	48.9	22,892	30.6	18.4
Wyoming	8,118	5,001	61.6	187	2.3	2.0
Puerto Rico	16,750	8,459	50.5	2,864	17.1	14.2
USA	\$4,862,170	\$2,708,229	55.7%	\$1,419,754	29.2%	15.9%

Source: Report on Profitability, By Line, By State, 1991, December, 1992;
National Association of Insurance Commissioners

Exhibit 3, Sheet 1

**MEDICAL MALPRACTICE INSURANCE
MULTI-YEAR REVIEW OF EXPERIENCE (1985-1991)**

As Reported

<u>Cal. Year</u>	<u>Premium Earned*</u>	<u>Losses Incurred*</u>	<u>Loss Ratio</u>	<u>Ins. Co. Expenses*</u>	<u>Expense Ratio</u>	<u>Return on Net Worth</u>
1985	\$ 2,660,985	\$ 3,206,487	120.5%	\$ 1,612,557	60.6%	- 5.2%
1986	3,808,105	3,537,730	92.9	1,831,699	48.1	11.2
1987	4,550,493	3,726,854	81.9	2,206,989	48.5	12.6
1988	5,067,749	3,638,644	71.8	2,341,300	46.2	17.2
1989	5,119,518	2,723,583	53.2	2,513,683	49.1	22.4
1990	4,930,786	2,657,694	53.9	2,682,348	54.4	17.4
1991	<u>4,862,170</u>	<u>2,708,229</u>	<u>55.7</u>	<u>2,645,020</u>	<u>54.4</u>	<u>15.9</u>
Total	\$30,999,806	\$22,199,221	71.6%	\$15,833,596	51.1%	14.4%

Premiums Earned: Reported and Constant Dollars

<u>Cal. Year</u>	<u>Reported Premiums Earned*</u>	<u>CPI All Items Index**</u>	<u>CPI Medical Index**</u>	<u>Constant \$ Prem. Earned All Items Adjusted*</u>	<u>Medical Adjusted*</u>
1985	\$ 2,660,985	1.000	1.000	\$ 2,660,985	\$ 2,660,985
1986	3,808,105	1.016	1.075	3,748,135	3,542,423
1987	4,550,493	1.074	1.146	4,236,958	3,970,762
1988	5,067,749	1.099	1.221	4,611,237	4,150,491
1989	5,119,518	1.154	1.315	4,436,324	3,893,170
1990	4,930,786	1.210	1.434	4,075,030	3,438,484
1991	4,862,170	1.263	1.559	3,849,699	3,118,775

Losses Incurred: Reported and Constant Dollar

Cal. Year	Reported Losses Earned*	CPI All Items Index**	CPI Medical Index**	<u>Constant \$ Losses Incurred</u>	
				<u>All Items Adjusted*</u>	<u>Medical Adjusted*</u>
1985	\$ 3,206,487	1.000	1.000	\$ 3,206,487	\$ 3,206,487
1986	3,537,730	1.016	1.075	3,482,018	3,290,912
1987	3,726,854	1.074	1.146	3,470,069	3,252,054
1988	3,638,644	1.099	1.221	3,310,868	2,980,052
1989	2,723,583	1.154	1.315	2,360,124	2,071,166
1990	2,657,694	1.210	1.434	2,196,441	1,853,343
1991	2,708,229	1.263	1.559	2,144,283	1,737,157

Insurance Company Expenses: Reported and Constant Dollar

Cal. Year	Reported Insurer Expenses*	CPI All Items Index**	CPI Medical Index**	<u>Constant \$ Expen. Incurred</u>	
				<u>All Items Adjusted*</u>	<u>Medical Adjusted*</u>
1985	\$ 1,612,557	1.000	1.000	\$ 1,612,557	\$ 1,612,558
1986	1,831,699	1.016	1.075	1,802,853	1,703,906
1987	2,206,989	1.074	1.146	2,504,943	1,925,819
1988	2,341,300	1.099	1.221	2,130,391	1,780,456
1989	2,513,683	1.154	1.315	2,178,235	1,911,546
1990	2,682,348	1.210	1.434	2,216,817	1,870,536
1991	2,645,020	1.263	1.559	2,094,235	1,696,613

* 000 deleted

** July of each year; 1985 = 1.000; Source: Telephone call to Bureau of Labor Statistics, Consumer Price Index Hotline, March 2, 1993.

Source of Insurance Data: Report on Profitability, By Line, By State, years indicated, National Association of Insurance Commissioners.

Exhibit 4

MEDICAL MALPRACTICE INSURANCE

IMPACT OF MEDICAL MALPRACTICE INSURANCE ON HEALTH CARE

	(1)	(2)	(3)	(4)	(5)
<u>Year</u>	<u>Health Care Costs*</u>	<u>Med. Mal. Earned Prem.</u>	<u>(2)/(1)</u>	<u>Med. Mal. Incurred Losses</u>	<u>(4)/(1)</u>
1985	\$422,600,000	\$ 2,660,985	0.6%	\$3,206,487	0.8%
1986	454,900,000	3,808,105	0.8	3,537,730	0.8
1987	494,200,000	4,550,493	0.9	3,726,854	0.8
1988	546,100,000	5,067,749	0.8	3,638,644	0.7
1989	604,300,000	5,119,518	0.8	2,723,583	0.5
1990	675,000,000	4,930,786	0.7	2,657,694	0.4
1991	751,800,000	4,862,170	0.6	2,708,229	0.4

* Source: Health Care Finance Administration, Telephone Call of March 3, 1993.

Note: All dollar figures 000 deleted.